

CLAIMS:

1. An actuator for data storage devices, the actuator comprising:
an actuator arm having a proximal end and a distal end, the actuator arm
being rotatable in a rotational plane for supporting a transducer
with respect to a data storage medium; and
a head gimbal assembly connected to the distal end of the actuator arm at
an inclined angle with respect to the rotational plane of the
actuator arm.
2. The actuator of claim 1 wherein the head gimbal assembly comprises a
load beam having a proximal region, a distal region, and a hinge region between
the proximal region and the distal region.
3. The actuator of claim 2 wherein the head gimbal assembly comprises a
base plate at the proximal region of the load beam.
4. The actuator arm of claim 2 wherein the head gimbal assembly further
comprises:
a slider for carrying the transducer; and
a gimbal connecting the slider to the distal region of the load beam.
5. The actuator of claim 2 wherein the hinge region includes a notch across
the load beam.
6. The actuator of claim 1 wherein the actuator arm includes a mounting
block having an angled surface.

7. The actuator of claim 6 wherein the mounting block is positioned on a side of the actuator arm that is facing the data storage medium.
8. The actuator of claim 1 and further comprising:
 - a wedge with a planar surface and an angled surface, wherein the actuator arm is attached to the planar surface of the wedge and the head gimbal assembly is attached to the angled surface of the wedge.
9. A data storage device, the storage device comprising:
 - a data storage disc;
 - a rotatable arm with a distal end and a proximal end; and
 - a head gimbal assembly attached to the distal end at an angle so that when loaded against the disc, the head gimbal assembly is concave in a direction facing away from the disc.
10. The data storage device of claim 9 wherein the head gimbal assembly comprises a load beam having a proximal region, a distal region, and a hinge region between the proximal region and the distal region.
11. The data storage device of claim 10 wherein the head gimbal assembly further comprises a base plate at the proximal region of the load beam.
12. The data storage device of claim 10 wherein the head gimbal assembly further comprises a slider for carrying a transducer; and a gimbal connecting the slider to the distal region of the load beam.
13. The data storage device of claim 10 wherein the hinge region includes a

notch across the load beam.

14. An actuator for positioning a transducer with respect to a storage medium in a storage device, the actuator comprising:
a mounting block with a sloped mounting surface wherein the sloped mounting surface is greater than zero degrees, but less than ninety degrees with respect to a top plane of the mounting block so that the sloped mounting surface creates a downward plane;
a head gimbal assembly attached to the sloped mounting surface of the mounting block.
15. The actuator of claim 14 wherein the head gimbal assembly comprises a load beam having a proximal region, a distal region, and a hinge region between the proximal region and the distal region.
16. The actuator of claim 15 wherein the head gimbal assembly further comprises a base plate at the proximal end of the load beam.
17. The actuator of claim 15 wherein the head gimbal assembly further comprises a slider for carrying a transducer; and a gimbal connecting the slider to the distal region of the load beam.
18. The actuator of claim 15 wherein the hinge region includes a notch across the load beam.
19. A method of assembling an actuator, the method comprising:
attaching an unbent head gimbal assembly to a mounting block with a sloped surface; and

loading the head gimbal assembly onto a data storage medium so that a portion of the head gimbal assembly assumes a concave shape facing away from the data storage medium.